Hieroglyphs

Along with pyramids and mummies, the ancient Egyptians are remembered for their written language: a beautiful and mysterious-looking script that covered the walls of tombs, temples, and coffins. The pictures and symbols that made up ancient Egypt's earliest form of writing are called hieroglyphs. (The word hieroglyph translates to mean "sacred carving.") There are hundreds of hieroglyphs, divided into three categories called phonograms, logograms, and determinatives.

Phonograms are symbols that represent a sound. Like our alphabet, there are a few dozen symbols that each represent one sound. For example, a picture of an owl represented the "m" sound. Most of the other symbols represent a combination of either two or three consonant sounds.


man


woman


god, king


force, effort

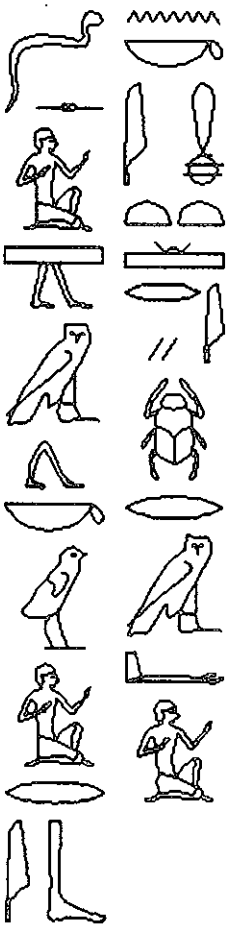

eat, drink, speak

Some determinative symbols.

Logograms are also known as ideagrams, and are symbols that represent the word they look like. For example, the symbol for a house looks kind of like a flat-roofed house. Logograms

Did You Know?

Ancient Egyptian writing followed grammar rules that are very different from those in English. It would be a challenging language for most people to learn today.



Hieroglyphs were mainly used in formal writing, such as on tomb walls. They were written in horizontal rows and vertical columns without punctuation! They could be written from right to left or left to right. To indicate which direction a reader should read, a writer drew the faces of animals and people toward the beginning of the sentence. For example, if the faces were facing to the left, a reader knew to read from left to right.

As ancient Egyptian culture evolved, so did their language and writing. A shorthand version of hieroglyphs called **hieratic script** came into use. Unlike hieroglyphs, it was always read from right to left. More cursive in style, hieratic script made it easier to write quickly, especially on papyrus and ostraca. Hieratic script was used for everyday documents like letters and for business or government records. Next, around 700 BCE, came **demotic script**. Because it used more phonetic symbols that represented sounds in spoken language, more people could read demotic script. *Demotic* means "common or popular." Later on, around the time Egypt was ruled by the Ptolemies (305–30 BCE), Coptic script was invented by combining the Greek alphabet and demotic script.

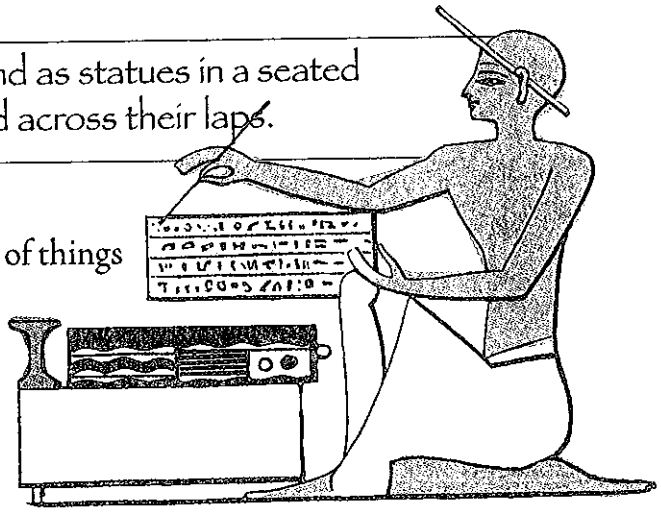
Coptic script.

Very few ancient Egyptians could read and write. (Some estimate the number to be one out of a hundred people.) That job was left to scribes, and for that reason the scribes were

Determinatives help define or clarify a word. For example, the ancient Egyptians might write a name and then follow it with the symbol of a man so readers knew the person was a man.

Did You Know?

Scribes are often shown in pictures and as statues in a seated position with a piece of papyrus rolled across their laps.

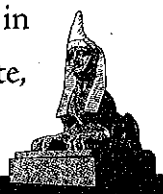


Scribe with an inkstand.

incredibly important! They were in charge of things like copying texts, writing important letters, paying workers and keeping track of accounts, collecting taxes, recording the outcomes of court cases, and organizing the building of pyramids and temples. Scribes were highly respected. It has been suggested, though, that scribes guarded their knowledge of reading and writing tightly, and kept it to themselves in order to maintain a position of power in the community. After all, if more people could read and write, scribes wouldn't be needed as much.

Scribes typically came from wealthy or powerful families, and the position was often passed from father to son. Boys began their training to become scribes at a young age, around 10 years old. They attended training at another scribe's house or at a temple. (Being a scribe was the only job in ancient Egypt that people went to school for. All other professions were learned through an apprenticeship.) Boys learned to read and write by memorizing texts and copying scripts. Because papyrus was too expensive to practice on, boys wrote on less valuable ostraca.

A scribe's palette was a narrow, rectangular piece of wood or stone that had two shallow



Words to Know

phonogram: the type of hieroglyph that represents a sound.

logogram: the type of hieroglyph that represents the word it looks like.

determinative: the type of hieroglyph that helps define or clarify a word.

hieratic script: a shorthand, cursive style of hieroglyphic script. It was used for everyday documents like letters and business or government records.

demotic script: a cursive form of ancient Egyptian writing and one of the three scripts found on the Rosetta stone.

Words to Know

Rosetta stone: a stone found in 1799 that had the same decree written in three different languages: hieroglyphs, demotic script, and Greek. It was the key to unlocking the mysteries of ancient Egypt's written language.

wells for ink. Black ink was often made with soot, and red ink was made from red ochre. Water was mixed with these solids to make ink. There was a slit down the middle of the palette to hold the pens, which were brushes made with pounded or chewed reeds. It could take as many as 10 years to learn all the hieroglyphic signs and the other subjects scribes needed to know, such as mathematics, astrology, astronomy, and art. Teachers were strict and often used physical punishment on students who did poorly at a lesson.

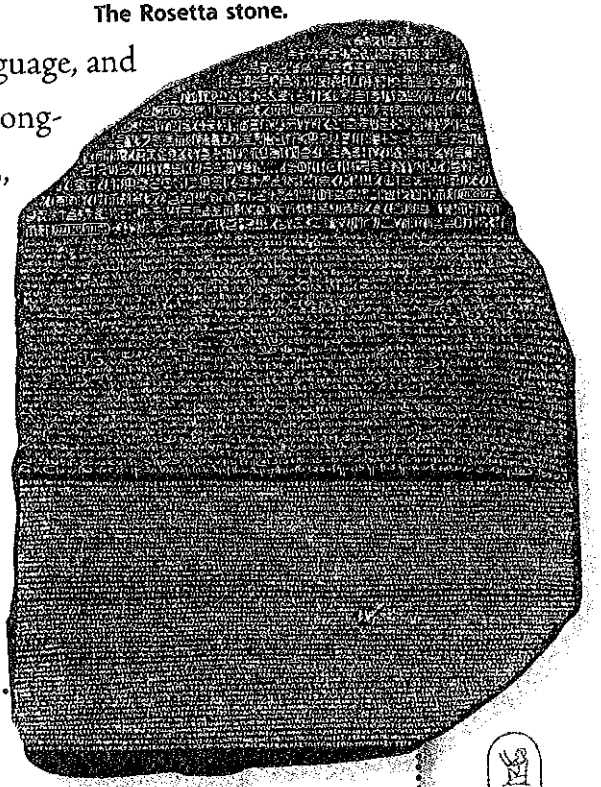
After the Romans took over Egypt in 30 BCE, Egypt was gradually converted to Christianity, and Egyptian writing was eventually banned. Since no one was reading and writing it, hieroglyphs were forgotten. The meaning of the many hieroglyphs of ancient Egypt might have been lost forever if it hadn't been for the **Rosetta stone** and the French scholar named Jean-François Champollion who translated it.

Jean-François Champollion

The Rosetta stone is a large carved stone that was found in 1799 in the western delta of Egypt near the town of Rosetta. It is a piece of a larger stone and is about 45 inches high, 28.5 inches wide, and 11 inches thick. (The larger stone from which it broke off has not been found.) Carved on the Rosetta stone is a decree celebrating the 1-year anniversary of the coronation of Ptolemy V. But what's so remarkable about the Rosetta stone is that the decree is written in three different languages: hieroglyphs, demotic script, and Greek.

Did You Know?

Because we don't know the sounds that certain hieroglyphic symbols represented, and because the language didn't use vowels, no one knows for certain what the spoken ancient Egyptian language *sounded* like! To make words easier to pronounce, Egyptologists added "e" or "a" to them.



The Rosetta stone.

Jean-François Champollion had a lifelong love of language, and by studying these three scripts, he was able to break the long-forgotten code of hieroglyphs in 1822. (As the story goes, he had wanted to decode hieroglyphs ever since he was a boy and saw them on a temple!) Once people could finally read what was written on the tombs and papyri, they were able to learn a tremendous amount about the culture of the ancient Egyptians. It's fair to say that Champollion was one of the pioneers of Egyptology. Today, you can see the Rosetta stone for yourself at the British Museum in London.

Numbers in Ancient Egypt

Much of what we know about the ancient Egyptian number system and mathematics comes from studying several papyri, including the Rhind papyrus. Like our mathematical system, the ancient Egyptian system worked in base 10. They used pictures or symbols to represent numbers. For numbers 1 through 9, they made strokes. (One stroke or line for 1, two strokes for 2, and so on.) The number 10 was represented by a hobble for cattle (the symbol looks like an upside down letter "u"). The sign for 100 was a coil of rope. A lotus plant represented 1,000. A frog or tadpole was the symbol for 100,000. And 1,000,000 was conveyed by a god with his arms raised above his head. Numbers were usually placed largest to smallest, but it didn't really matter. Ancient Egyptians used what was called a simple grouping or additive system; it didn't rely on positional values. And because their numbers didn't rely on positional value, they didn't need zero. For example, when we write 101, zero marks the tens' value. But in ancient Egypt, that number would be written as one coil of rope and one stroke.

As with their writing, ancient Egyptians eventually found they needed a faster, more efficient way to represent numbers. So they came up with hieratic numerals. In this system, there were symbols for 1–10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, and 9000.